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Education

Ph.D. (Seismology), Saint Louis University, 2010
M.S. (Geophysics), University of Science and Technology of China, 2004
B.S., University of Science and Technology of China (USTC), 2000

Employment

08/2020-present, Associate Professor, The Chinese University of Hong Kong
03/2020-03/2022, Guest Professor, Institute of Earthquake Forecasting, CEA
05/2018-present, Guest Professor, State Key Laboratory of Earthquake Dynamics, Institute of Geology, China Earthquake Administration (CEA)
08/2014-07/2020, Assistant Professor, The Chinese University of Hong Kong
02/2013-07/2014, Research Scientist, Georgia Institute of Technology
09/2010-01/2013, Postdoctoral Investigator, Woods Hole Oceanographic Institution

Teaching

- The Chinese University of Hong Kong :
Advanced Topics in Geophysics, 2020-21
Seismology, 2016-2022
Marine Geology and Geophysics, 2016-2018
Physics of the Earth, 2014-2021
Statistical Method and Data Analysis, 2015-2019
Continuum Mechanics, 2017
Exploring the Earth System, 2017-2021
Applied Geophysics, 2017-2021
Research Frontier of Earth and Atmospheric Sciences, 2015-2020
- Short Course:
Training Course of Algorithms and Programs in Seismology, 2020, USTC online
Earthquake Physics, 2015-2018, Peking University
HypoDD and CAP methods, 2013, Georgia Institute of Technology

Research Interests

Earthquake source physics; Subduction zone processes and megathrust earthquakes; High-resolution structure and temporal variation of crustal fault zones; and Induced earthquakes

Honors and Awards

- 2021, Grand Prize of Ocean Science and Technology, Chinese Society for Oceanography
- 2021, Outstanding Associate Editor, Earthquake Science
- 2021 and 2020, Outstanding Editorial Service, Earth and Planetary Physics
- 2018, *Fuchengyi* Young Scientist Award, Chinese Geophysical Society
- 2017, 2016 Editors' Citation for Excellence in Refereeing-Geophysical Research Letters
- 2012, Nominee for the Council of Graduate Schools/ProQuest Distinguished Dissertation Award, Saint Louis University

Refereed Journal Publications (*corresponding author, †student/postdoc supervised)

85. Zhang, E.[†], and H. Yang* (2022), An automated, deep-learning-based method for identifying anomalous seismicity, *J. Geophys. Res.*, in prep.
84. Guo, R.[†], and H. Yang* (2021), Slip rates derived from viscoelastic earthquake-cycle models in Northeastern Tibetan Plateau, *Geology*, in prep.
83. Zhang, J.[†], Z. Sun, H. Yang*, and F. Zhang (2022), A model of plate bending at the transition from subduction to collision in northernmost Manila trench, *Geophys. Res. Lett.*, in prep.
82. Yao, S.[†], and H. Yang* (2022), Threats from surface ruptures of earthquakes, *Science*, Submitted
81. Zhang, J.[†], H. Yang*, G. Zhu[†], H. Chen[†], F. Zhang, and Z. Sun (2022), Lateral change of plate bending stress and seismicity along the southern Mariana Trench, *Tectonics*, Revised (Major)
80. Yao, S.[†], and H. Yang* (2022), Towards Predicting Ground Motions for Potential Maximum Earthquakes from Interseismic Locking Models, *J. Geophys. Res.*, submitted
79. Zhang, J.[†], M. Zhao, Z. Sun, L. Sun, M. Xu, H. Yang, Q. Wang, X. Pang, J. Zheng, and Y. Yao (2022), Large volumes of magma involved in South China Sea rifting: Implications for an earlier mantle breakup, *Nature Communications*, under review
78. Chen, H.[†], H. Yang*, G. Zhu[†], M. Xu, J. Lin, and Q. You (2022), Deep outer-rise faults in the Southern Mariana Subduction Zone indicated by a machine-learning-based high-resolution earthquake catalog, *Geophys. Res. Lett.*, revised
77. Zhu, G.[†], H. Yang*, Y. Tan, M. Jin, X. Li, and W. Yang (2022), The Cascading Foreshock Sequence of the Ms 6.4 Yangbi Earthquake in Yunnan, China, *Earth Planet. Sci. Lett.*, No.117594, <https://doi.org/10.1016/j.epsl.2021.117594>
76. Wang, H., C. Fan, Y. Fang, S. Zhao, X. Shi, J. Liu, H. Yang, J. Hu, and C. Lian (2022), Structural Analysis and Evolution Model of the Longmaxi Formation in the Yanjin–Junlian Area of the Southern Sichuan Basin, China, *Front. Earth Sci.*, 10:884971, doi: 10.3389/feart.2022.884971
75. Yang, H. Z., R. Guo[†], J. Zhou, H. Yang*, and H. Sun (2022), Transient poroelastic response to megathrust earthquakes: A look at the 2015 Mw 8.3 Illapel, Chile, event *Geophys. J. Int.*, ggac099, <https://doi.org/10.1093/gji/ggac099>

74. Yang, H.*, S. Yao[†], and X. Chen[†] (2022), Rupture propagation on heterogeneous fault: challenges for predicting earthquake magnitude, *Chin. Sci. Bull.*, in Chinese, 67:1-14, <https://doi.org/10.1360/TB-2021-1086>
73. She, Y., H. Yao, H. Yang*, J. Wang, and J. Feng (2022), Constraining the depth extent of low-velocity zone along the Chenghai Fault by dense array ambient noise interferometry and horizontal-to-vertical spectral ratio, *Tectonophysics*, v.827, <https://doi.org/10.1016/j.tecto.2022.229265>
72. Yang, H.*, D. Wang, R. Guo, M. Xie, Y. Zang, Y. Wang, Q. Yao, C. Cheng, Y. An, and Y. Zhang (2022), Rapid report of the 8 January 2022 Menyuan M_s 6.9 earthquake, Qinghai, China, *Earthquake Res. Adv.*, 2(1), <https://doi.org/10.1016/j.eqrea.2022.100113>
71. Song, J.[†], and H. Yang* (2022), Seismic Site Response Inferred from Records at a Dense Linear Array across the Chenghai Fault Zone, Binchuan, Yunnan, *J. Geophys. Res.*, 127(1), doi:10.1029/2021JB022710
70. Yao, S.[†], and H. Yang* (2022), Hypocentral dependent shallow slip distribution and rupture extents along a strike-slip fault, *Earth Planet. Sci. Lett.*, volume 578, No.117296, <https://doi.org/10.1016/j.epsl.2021.117296>
69. Guo, L., J. Lin, H. Yang, and J. Tian (2022), Aftershocks of the 2012 M_w 8.6 Wharton Basin intraplate earthquake in the eastern Indian Ocean revealed by near-field ocean-bottom seismometers, *Seismo. Res. Lett.*, 93(2A):706–718, doi:10.1785/0220210096
68. Luan, Y.[†], H. Yang*, B. Wang, W. Yang, W. Wang, J. Yang, and X. Li (2022), Time-lapse monitoring of daily velocity changes in Binchuan, southwestern China, using large volume air gun source array data, *Seismo. Res. Lett.*, 93(2A):914–930, doi:10.1785/0220210160
67. Guo, R.[†], and H. Yang*, Y. Li, Y. Zheng, and L. Zhang (2022), Complex slip distribution of the 2021 M_w 7.4 Maduo, China, earthquake: an event occurring on a slowly slipping fault, *Seismo. Res. Lett.*, 93(2A):653-665, doi:10.1785/0220210226
66. Shao, X., H. Yao*, Y. Liu, H. Yang, B. Tian, and L. Fang (2022), Shallow crustal velocity structures revealed by active source tomography and fault activities of the Mianning-Xichang segment of the Anninghe fault zone, Southwest China, *Earth Planet. Phys.*, 6(2):204–212, <http://doi.org/10.26464/epp2022010>
65. Zhang, F., J. Lin, Z. Zhou, H. Yang, and J. Morgan (2022), Mechanism of progressive broad deformation from oceanic transform valley to off-transform faulting and rifting, *The Innovation*, 3(1), 100193, <https://doi.org/10.1016/j.xinn.2021.100193>
64. Zhang, Y., Y. An, F. Long, G. Zhu^{†*}, M. Qin, Y. Zhong, Q. Xu, and H. Yang (2022), Short-term Foreshock and Aftershock Patterns of the 2021 M_s 6.4 Yangbi Earthquake Sequence, *Seismo. Res. Lett.*, 93(1), pp.21–32, doi:10.1785/0220210154
63. Zhang, J.[†], F. Zhang*, H. Yang, Z. Sun, and J. Lin (2022), The effects of plateau subduction on plate bending, stress, and intraplate seismicity, *Terra Nova*, 34(2), doi: 10.1111/ter.12570
62. Zhou, P.[†], W. L. Ellsworth, H. Yang*, Y. J. Tan, G. C. Beroza, M. Sheng, and R. Chu (2021), Machine-learning-facilitated earthquake and anthropogenic source detections near

- the Weiyuan Shale Gas Blocks, Sichuan, China, *Earth Planet. Phys.*, 5(6), p.503–521, doi: 10.26464/epp2021053
61. Yang, J., Y. Li, N. Yun*, S. Zhou, H. Yang, Z. Yang, and Y. Yao (2021), Dynamic earthquake triggering in the north of Xiaojiang fault zone, Yunnan, Chinese Journal of Geophysics (in Chinese), 64(9): 3207-3219, doi: 10.6038/cjg2021P0139
 60. Li, F., Z. Sun, W. Ding, H. Yang, X. Pang, H. Li, and J. Zheng (2021), Compression-induced anomalous subsidence in the extensional sedimentary basin: A numerical study from the Pearl River Mouth Basin, northern South China Sea margin, *Geophys. Res. Lett.*, v.48, no.18, doi:10.1029/2021GL094750
 59. Wong, J. W.C.[†], J. Zi[†], H. Yang*, and J. Su (2021), Spatial-temporal evolution of injection-induced earthquakes in the Weiyuan Area determined by machine-learning phase picker and waveform cross-correlation, *Earth Planet. Phys.*, 5(6), doi: 10.26464/epp2021055
 58. Jiang, X.[†], S. Hu, and H. Yang* (2021), Depth extent and V_p/V_s of the Chenghai fault zone, Yunnan, China constrained from dense-array-based teleseismic receiver functions, *J. Geophys. Res.*, v.126, no.8, doi:10.1029/2021JB022190
 57. Zhu, G.[†], D. Wiens, H. Yang*, J. Lin, M. Xu, and Q. You (2021), Upper mantle hydration indicated by decreased shear velocity near the Southern Mariana Trench from Rayleigh wave tomography, *Geophys. Res. Lett.*, 48(15), <https://doi.org/10.1029/2021GL093309>
 56. Yang, H.* , Y. Duan[†], J. Song[†], W. Wang, W. Yang, X. Tian, and B. Wang (2021), Illuminating high-resolution crustal fault zones and temporal changes using multi-scale dense arrays and airgun source, *Earthquake Res. Adv.*, v.1, no.1, doi:10.1016/j.eqrea.2021.100001
 55. Liu, C.[†], H. Yang*, B. Wang, and J. Yang (2021), Impacts of reservoir water level fluctuation on measuring seasonal seismic travel time changes in the Binchuan basin, Yunnan, China, *Remote Sensing*, 13, 2421, <https://doi.org/10.3390/rs13122421>
 54. Chen, X.[†], H. Yang*, and M. Jin (2021), Inferring slip-weakening distance from near-fault accelerogram of the 2014 M_w 6.2 Ludian earthquake, *Seismo. Res. Lett.*, v.92, no.6, p.3416–3427, doi:10.1785/0220210089
 53. Zhang, J.[†], F. Zhang, J. Lin, and H. Yang (2021), Yield failure of the subducting plate at the Mariana Trench, *Tectonophysics*, v.814, <https://doi.org/10.1016/j.tecto.2021.228944>
 52. Jiang, G.[†], L. Liu, A. J. Barbour, R. Lu, and H. Yang (2021), Physics-based evaluation of the maximum magnitude of potential earthquakes induced by the Hutubi (China) underground gas storage, *J. Geophys. Res.*, v.126, no.4, e2020JB021379, doi:10.1029/2020JB021379
 51. Yang, H.* and S. Yao[†] (2021), Shallow destructive earthquakes, *Earthquake Science*, v.34, no.1, doi:10.29382/eqs-2020-0072
 50. Guo, R.[†], H. Yang, Y. Zhu, Y. Zheng, J. Xu, L. Zhang, and C. An (2021), Narrow Rupture of the 2020 M_w 7.4 La Crucecita, Mexico, Earthquake, *Seismo. Res. Lett.*, vol.92, no.3, 1891-1899, doi:10.1785/0220200328
 49. Chen, H.[†], X. He, H. Yang*, and J. Zhang[†] (2021), Fault-plane determination of the 4 January 2020 offshore Pearl River Delta earthquake and its implication for seismic hazard assessment, *Seismo. Res. Lett.*, vol.92, no.3, 1913-1925, doi:10.1785/0220200232

48. Yun, N., H. Yang, and S. Zhou (2021), DynTriPy: A Python Package for Detecting Dynamic Earthquake Triggering Signals, *Seismo. Res. Lett.*, v.92, no.1, pp.543-554, doi:10.1785/0220200216
47. Jiang, X.[†], H. Yang^{*}, W. Yang, and W. Wang (2020), Crustal structure in the Binchuan Basin of Yunnan constrained from receiver functions on a 2-D seismic dense array, *Earthquake Science*, vol.33, pp.264-272, doi: 10.29382/eqs-2020-0264-01
46. Sheng, M., R. Chu, S. Ni, Y. Wang, L. Jiang, and H. Yang (2020), Source parameters of three moderate size earthquakes in Weiyuan, China, and their relations to shale gas hydraulic fracturing, *J. Geophys. Res.*, 125 (10), e2020JB019932, doi: 10.1029/2020JB019932
45. Li, F., Z. Sun, H. Yang, J. Lin, J. Stock, H. Xu, and L. Sun (2020), Continental interior and edge breakup at convergent margins induced by subduction direction reversal: A numerical modeling study applied to the South China Sea margin, *Tectonics*, v.39, 11, doi:10.1029/2020TC006409
44. Yang, H.^{*}, P. Zhou[†], N. Fang, G. Zhu[†], W. Xu, J. Su, F. Meng, and R. Chu (2020), A shallow shock: the 25 February 2019 M_L 4.9 earthquake in the Weiyuan shale gas field in Sichuan, China, *Seismo. Res. Lett.*, 91(6), p.3182–3194, doi:10.1785/0220200202
43. Chen, X.[†], and H. Yang^{*} (2020), Effects of seismogenic width and low-velocity zones on estimating slip-weakening distance from near-fault ground deformation, *Geophys. J. Int.*, vol.223, pp.1497–1510, ggaa385, <https://doi.org/10.1093/gji/ggaa385>
42. Wang, M., H. Yang, L. Fang, L. Han, D. Jia, D. Jiang, and B. Yan (2020), Shallow faults reactivated by hydraulic fracturing: The 2019 Weiyuan earthquake sequences in Sichuan, China, *Seismo. Res. Lett.*, 91(6), p.3171–3181, doi:10.1785/0220200174
41. Yang, H.^{*}, Y. Duan[†], J. Song[†], X. Jiang[†], X. Tian, W. Yang, W. Wang, and J. Yang (2020), Fine structure of the Chenghai fault zone, Yunnan, China constrained from teleseismic travel time and ambient noise tomography, *J. Geophys. Res.*, vol.125, 7, e2020JB019565, doi: 10.1029/2020JB019565
40. Yao, S.[†], and H. Yang^{*} (2020), Rupture Dynamics of the 2012 Nicoya M_w 7.6 Earthquake: Evidence for Low Strength on the Megathrust, *Geophys. Res. Lett.*, 47 (13), e2020GL087508, <https://doi.org/10.1029/2020GL087508>
39. Zhu, G.[†], H. Yang^{*}, J. Lin, and Qingyu You (2020), Determining the orientation of ocean-bottom seismometers on the seafloor and correcting for polarity flipping via polarization analysis and waveform modeling, *Seismo. Res. Lett.*, 91(2A), p.814–825, doi: 10.1785/0220190239.
38. Jiang, G.[†], X. Qiao, X. Wang, R. Lu, L. Liu, H. Yang, Y. Su, L. Song, B. Wang, and T.F. Wong (2020), GPS observed horizontal ground extension at the Hutubi (China) underground gas storage facility and its application to geomechanical modeling for induced seismicity, *Earth Planet. Sci. Lett.*, 530, <https://doi.org/10.1016/j.epsl.2019.115943>
37. Yun, N.[†], S. Zhou, H. Yang^{*}, H. Yue, and L. Zhao (2019), Automated Detection of Dynamic Earthquake Triggering Signals by High Frequency Power Integral Ratio, *Geophys. Res. Lett.*, vol.46 (22), pp. 12977-12985, doi: 10.1029/2019GL083913

36. Yang, H.* , S. Yao[†], B. He[†], A. Newman, and H. Weng[†] (2019), Deriving Rupture Scenarios From Interseismic Locking Distributions Along the Subduction Megathrust, *J. Geophys. Res.*, 124 (10), pp.10376–10392, <https://doi.org/10.1029/2019JB017541>
35. Guo, Y., J. Xu, C. Lin, X. Jin, H. Yao, H. Yang, and H. Cai (2019), Experiments on exploration of shallow fine structures and the construction of the 1-D velocity model in the Pingtan Island, Fujian, *Earthq. Res. China*, 33(2), p.265-275, doi:10.19743/j.cnki.0891-4176.201902013
34. Zhou, P.[†], H. Yang*, B. Wang, and J. Zhuang (2019), Seismological investigations of induced earthquakes near the Hutubi underground gas storage facility, *J. Geophys. Res.*, 124 (8), pp.8753-8770, doi:10.1029/2019JB017360
33. Zhu, G.[†], H. Yang*, J. Lin, Z. Zhou, M. Xu, J. Sun, and K. Wan (2019), Along-strike variation in slab geometry at the southern Mariana subduction zone revealed by seismicity through ocean bottom seismic experiments, *Geophys. J. Int.*, V.218 no.3, p.2122-2135, doi:10.1093/gji/ggz272
32. Li, F., Z. Sun, X. Pang, J. Liao, H. Yang, H. Xie, H. Zhuo, and Z. Zhao (2019), Low-viscosity crustal layer controls the crustal architecture and thermal distribution at hyper-extended margins: Modeling insight and application to the northern South China Sea margin, *G-Cubed*, 20 (7), pp.3248–3267, doi: 10.1029/2019GC008200
31. Yang, H.* , S. Yao[†], B. He[†], and A. Newman (2019), Earthquake rupture dependence on hypocentral location along the Nicoya Peninsula subduction megathrust, *Earth Planet. Sci. Lett.*, 520, p.10-17, <https://doi.org/10.1016/j.epsl.2019.05.030>
30. Wan, K., J. Lin, S. Xia, J. Sun, M. Xu, H. Yang, Z. Zhou, X. Zeng, J. Cao, and H. Xu (2019), Deep seismic structure across the southernmost Mariana Trench: Implications for arc rifting and plate hydration, *J. Geophys. Res.*, 124 (5), pp.4710–4727, doi:10.1029/2018JB017080
29. Li, W., Y. Chen, F. Liu, H. Yang, J. Liu, and B. Fu (2019), Chain-style landslide hazardous process: Constraints from seismic signals analysis of the 2017 Xinmo landslide, SW China, *J. Geophys. Res.*, 124(2), pp.2025–2037, doi:10.1029/2018JB016433
28. Zhang, J., Z. Sun, M. Xu, H. Yang, Y. Zhang, and F. Li (2018), Lithospheric 3-D flexural modelling of subducted oceanic plate with variable effective elastic thickness along Manila Trench, *Geophys. J. Int.*, ggy393, <https://doi.org/10.1093/gji/ggy393>
27. Li, F.[†], Z. Sun, and H. Yang* (2018), Possible spatial distribution of the Mesozoic volcanic arc in the present-day South China Sea continental margin and their tectonic implications, *J. Geophys. Res.*, 123, 6215-6235, doi:10.1029/2017JB014861
26. Weng, H.[†] and H. Yang* (2018), Constraining frictional properties on fault by dynamic rupture simulations and near-field observations, *J. Geophys. Res.*, v.123, p.6658-6670 doi:10.1029/2017JB015414, <https://doi.org/10.1029/2017JB015414>
25. Meng, X., H. Yang, and Z. Peng (2018), Foreshocks, b value Map and Aftershock Triggering for the 2011 M_w 5.7 Virginia Earthquake, *J. Geophys. Res.*, 123, 5082-5098, doi: 10.1029/2017JB015136, <https://doi.org/10.1029/2017JB015136>

24. He, L., X. Sun, H. Yang, S. Wang, Y. Shen, and X. Ye (2018), Upper crustal structure and earthquake mechanism in the Xinfengjiang water reservoir, Guangdong, China, *J. Geophys. Res.*, 123, 3799-3813, <https://doi.org/10.1029/2017JB015404>
23. Yu, H., Y. Liu, H. Yang, and J. Ning (2018), Modeling earthquake sequences along the Manila subduction zone: Effects of three dimensional fault geometry, *Tectonophysics*, <https://doi.org/10.1016/j.tecto.2018.01.025>
22. Zhang, F.[†], J. Lin, Z. Zhou, H. Yang, and W. Zhan (2018), Intra- and intertrench variations in flexural bending of the Manila, Mariana and global trenches: implications on plate weakening in controlling trench dynamics, *Geophys. J. Int.*, vol.212, p.1429–1449, ggx488, <https://doi.org/10.1093/gji/ggx488>
21. Yang, H., Y. Liu, M. Wei, J. Zhuang, and S. Zhou (2017), Induced earthquakes in the development of unconventional energy resources, *Science China Earth Sciences*, 60:1-13, doi:10.1007/s11430-017-9063-0
20. Weng, H.[†], and H. Yang* (2017), Seismogenic width controls aspect ratios of earthquake ruptures, *Geophys. Res. Lett.*, doi:10.1002/2016GL072168
19. Zhu, G.[†], X. Liang, X. Tian, H. Yang, C. Wu, Y. Duan, W. Li, and B. Zhou (2017), Analysis of the seismicity in central Tibet based on the SANDWICH network and its tectonic implications, *Tectonophysics*, doi: 10.1016/j.tecto.2017.02.020
18. Yin, J.[†], H. Yao, H. Yang*, W. Qin, J. Liu, and H. Zhang (2017), Frequency-dependent rupture process, stress change, and seismogenic mechanism of the 25 April 2015 Nepal Gorkha M_w 7.8 earthquake, *Science China Earth Sciences*, 60:1-13, doi:10.1007/s11430-016-9006-0
17. Luan, Y.[†], H. Yang*, and B. Wang (2016), Large volume air-gun waveform data processing (I): Binchuan, Yunnan, *Earthquake Research in China*, in Chinese, Vol.32, No.2, p.305–318
16. Weng, H.[†], H. Yang*, Z. Zhang, and X. Chen (2016), Earthquake rupture extents and coseismic slips promoted by damaged fault zones, *J. Geophys. Res.*, 121, Vol.121, No.6, p.4445–4457, doi:10.1002/2015JB012713
15. Yin, J.[†], H. Yang*, H. Yao, and H. Weng[†] (2016), Coseismic radiation and stress drop during the 2015 M_w 8.3 Illapel, Chile megathrust earthquake, *Geophys. Res. Lett.*, Vol.43, doi:10.1002/2015GL067381
14. Yang, H., J. Lin, J. Yin[†], and H. Yao (2015), Tectonic settings of the 2015 Mw 8.3 Coquimbo, Chile earthquake and its implications on megathrust earthquakes, *Chinese Sci. Bull.*, Vol.60, p.1-8, doi: 10.1360/N972015-01110
13. Weng, H.[†], J. Huang, and H. Yang* (2015), Barrier-induced supershear ruptures on a slip weakening fault, *Geophys. Res. Lett.*, doi:10.1002/2015GL064281
12. Yang, H. (2015), Recent advances in imaging crustal fault zones: a review, *Earthquake Science*, Vol.28 (2), p.151-162, doi:10.1007/s11589-015-0114-3
11. Yang, H., Z. Li, Z. Peng, Y. Ben-Zion, and F. Vernon (2014), Low velocity zones along the San Jacinto Fault, Southern California, from body waves recorded in dense linear arrays, *J. Geophys. Res.*, doi: 10.1002/2014JB011548.

10. Yang, H. and Z. Peng (2013), Lack of additional triggered tectonic tremor around the Simi Valley and the San Gabriel Mountain in Southern California, *Bull. of Seismol. Soc. Am.*, Vol. 103, 6, doi: 10.1785/0120130117.
9. Yang, H., Y. Liu, and J. Lin (2013), Geometrical effects of a subducted seamount on stopping megathrust ruptures, *Geophys. Res. Lett.*, 40, 2011-2016, doi:10.1002/grl.50509.
8. Yang, H., Y. Liu, and J. Lin (2012), Effects of subducted seamounts on megathrust earthquake nucleation and rupture propagation, *Geophys. Res. Lett.*, Vol. 39, L24302, doi:10.1029/2012GL053892.
7. Yang, H., L. Zhu, and E. S. Cochran (2011), Seismic structures of the Calico fault zone inferred from local earthquake travel time modeling, *Geophys. J. Int.*, 186(2), 760-770, doi: 10.1111/j.1365-246X.2011.05055.x.
6. Yang, H., and L. Zhu (2010), Shallow low-velocity zone of the San Jacinto fault from local earthquake waveform modeling, *Geophys. J. Int.*, 183(1), 421-432, doi: 10.1111/j.1365-246X.2010.04744.x.
5. Yang, H., L. Zhu, and R. Chu (2009), Fault-Plane Determination of the 18 April 2008 Mt. Carmel, Illinois, Earthquake by Detecting and Relocating Aftershocks, *Bull. of Seismol. Soc. Am.*, 99(6), 3413-3420, doi: 10.1785/0120090038.
4. Li, H., L. Zhu, and H. Yang (2007), High-resolution structures of the Landers fault zone inferred from aftershock waveform data, *Geophys. J. Int.*, 171(3), 1295-1307, doi:10.1111/j.1365-246X.2007.03608.x.
3. Xiao, W., J. Ren, F. Qi, Z. Song, M. Zhu, H. Yang, H. Jin, B. Wang, T. Zhou (2007), Empirical study on clique-degree distribution of networks, *Phys. Rev. E*, 76(3), 037102 p1-4, doi:10.1103/PhysRevE.76.037102.
2. Yang, H. and X. Shi (2004), Experimental study of wave velocity of sandstones under axial pressure. *Progress in Geophysics*, 19(2), 481-485.
1. Li, S., X. Shi, B. Wang, L. Ye, D. Sun, D. Wen, and H. Yang (2002), Analyzing characters of formation attenuation on seismic records, *Oil Geophys. Prospecting*, 37(3), 248-253.

Non-refereed Publications

1. Yang, H., X. Chen, R. Harrington, and Y. Liu (2021), Preface to the special collection of Induced Earthquakes, *Earth Planet. Phys.*, 5(6), p.483-484, doi:10.26464/epp2021057
2. Yao, H., B. Wang, X. Tian, H. Yang, and X. Tian (2019), Preface to the special issue of Dense Array Seismology, *Earthquake Science*, 31, 225-226, doi:10.29382/eqs-2018-0225-1
3. Yang, H. (2016), Unlocking the Mysteries of Earthquakes and Deep Ocean, Sustainable Campus, the Chinese University of Hong Kong, <http://www.iso.cuhk.edu.hk/english/publications/sustainable-campus/article.aspx?articleid=64285>
4. Yang, H. (2010), Study of earthquake fault zone structures by aftershock location and high-frequency waveform modeling, Ph.D Dissertation, Saint Louis University, Saint Louis, MO, USA
5. Yang, H. (2003), Experimental study of viscoelasticity and wave velocity of rocks. Master Thesis, in Chinese, University of Science and Technology of China, Hefei, Anhui, China

6. Yang, H. (2000), Improvement of the frequency-ratio method of measuring Q factor, Bachelor Thesis, in Chinese, University of Science and Technology of China, Hefei, Anhui, China

Hong Kong RGC Grants

1. Investigating fault zone structure and earthquakes in the Weiyuan shale gas field, Sichuan, China, Yang, H., 10/2021-9/2024, RGC GRF, Hong Kong
2. Investigation of seismic structure and outer-rise faulting at the southernmost Mariana subduction zone, Yang, H., 10/2020-9/2023, RGC GRF, Hong Kong
3. Modeling rupture segmentation and tsunamigenic rupture scenarios along the Cascadia megathrust, Yang, H., 10/2019-9/2022, RGC GRF, Hong Kong
4. Inferring frictional properties on seismogenic faults from kinematic and dynamic earthquake source modeling, Yang, H., 01/2019-12/2021, RGC GRF, Hong Kong
5. Investigation of fault zone structure and evolution from waveforms recorded at a dense seismic network, Yang, H., 09/2017-08/2020, RGC GRF, Hong Kong
6. Source characteristics of induced earthquakes associated with shale gas production in Weiyuan, Sichuan, Yang, H., 01/2017-12/2020, RGC/NSFC joint scheme, Hong Kong
7. Investigation of shallow seismogenesis on the southern Mariana megathrust, Yang, H., 01/2017-12/2019, RGC GRF, Hong Kong
8. Investigation of characteristics and mechanism of earthquakes associated with the Hutubi gas reservoir, Wong, T., H. Yang, and L. Liu., 01/2016-12/2019, RGC/NSFC joint scheme, Hong Kong
9. Dynamic Controls on Megathrust Slip: Details from the Nicoya 2012 Earthquake, Yang, H., 01/2016-12/2018, RGC ECS, Hong Kong

Other Grants

1. Investigating temporal changes of the southern Chenghai fault zone by Binchuan airgun, Yang, H., 05/2019-12/2020, CEA China Earthquake Experiment Site
2. High-resolution of fault zone structure derived from waveform modeling and imaging, Yang, H., 12/2018-12/2021, Major project of Ministry of Science and Technology, China
3. Scaling law and dynamics mechanism of earthquake sources, Yang, H., 08/2017-07/2020, Open Fund of Key Lab of Earthquake Source Dynamics, Institute of Geology, CEA
4. High-resolution fault zone structure and temporal changes of the Chenghai fault inferred from waveforms recorded at a dense seismic array, Yang, H., 07/2017-07/2018, CEA Chuandian Earthquake Center
5. Numerical simulations of earthquake cycles on the Xiaojinhe and Xianshuihe faults, Yang, H., 07/2017-07/2018, CEA Chuandian Earthquake Center
6. High-resolution fault zone structure and seismicity near the Xinfengjiang reservoir, Yang, H., 01/2017-12/2018, Open Fund of Isotope Key Lab, Guangzhou Institute of Geochemistry, China Academy of Science

7. Seismicity induced by underground injection and extraction of natural gas, Yang, H., 06/2016-05/2017, CUHK-UoM Research Fund
8. Effects of subducted seamounts on megathrust earthquakes, Yang, H., 03/2015-02/2016, Direct Research Grant, CUHK, Hong Kong
9. Detecting Low-Frequency Earthquakes within Deep Tremor in California, Peng, Z., and H. Yang, 02/2014–01/2015, Southern California Earthquake Center
10. Pilot Investigation of the Effects of Subducted Seamount on Megathrust Earthquakes, Yang, H., Y. Liu, and J. Lin, 09/2011–09/2012, Deep Ocean Exploration Institute award, Woods Hole Oceanographic Institution

Synergistic Activities and Professional Societies

- Associate Editor of *Seismological Research Letters*, *Earthquake Science*, and *Earthquake Research Advances*
- Editorial board of *Tectonophysics*, *Earth and Planetary Physics*, and *Earthquake Research*
- Committee:
 - Marine Geophysics, Chinese Geophysical Society;
 - Continental Dynamics, Chinese Geophysical Society;
 - Seismology, Seismological Society of China;
 - Tectonophysics, Seismological Society of China;
 - China Earthquake Experimental Site, China Earthquake Administration
- Membership: American Geophysical Union (AGU), Chinese Geophysical Society (CGS), Seismological Society of America (SSA), Seismological Society of China (SSOC), Southern California Earthquake Center (SCEC)
- Reviewer: NSF-Earthscope, NSF-Geophysics; *Bull. Seismol. Soc. Am.*, *Earth Planet. Sci. Lett.*, *Geophys. J. Int.*, *Geophys. Res. Lett.*, *J. Geophys. Res.*, *Marine Geophys. Res.*, *Nature Scientific Reports*, *Science China D*, *Science Bull.*, *Seismol. Res. Lett.*, *Tectonophysics*
- Outstanding Student Paper Judge: AGU since 2012; Earthscope meeting, 2011
- Conference/Workshop organized:
 - 2020.11: Impact of fault zone structure and fluid injection on earthquakes, Online, CUHK
 - 2019.09: Dynamics of Mariana subduction zone, SCSIO, Guangzhou, China
 - 2019.04: 5th International Conference on Rock Physics, CUHK, Hong Kong, China
 - 2018.11: South China Sea Tectonics and Subduction Zone Dynamics, CUHK, Hong Kong, China
 - 2018.3: Seismicity near the Hutubi Underground Gas Storage and Mechanism of Induced Earthquakes, CUHK, Hong Kong, China
 - 2017.5: Forum on Ocean and Earthquake, SUSTC, Shenzhen, China
 - 2017.2: Accretion and Subduction of the Oceanic Lithosphere, from Ridge to Trench, CUHK, Hong Kong, China

- Conference session convener and/or chair:
 - 2020, Integrated investigations on earthquake source physics process and earthquake hazard assessment, China Geosciences Union Annual Meeting, Chongqing, China
 - 2019, Linking Earthquake Kinematics with Dynamics, AGU Fall Meeting, San Francisco, USA
 - 2019, Integrated investigations on earthquake source physics process and earthquake hazard assessment, China Geosciences Union Annual Meeting, Beijing, China
 - 2018, Shallow subduction zone structure and dynamics, AGU Fall Meeting, Washington DC, USA
 - 2018, Recent advances in earthquake source physics and faulting mechanics, China Geosciences Union Annual Meeting, Beijing, China
 - 2018, Accretion and Subduction of the Oceanic Lithosphere, from Ridge to Trench, Asia Oceania Geosciences Society Annual Meeting, Honolulu, USA
 - 2018, Faulting and earthquake dynamics, International Conference for the Decade Memory of the Wenchuan Earthquake, Chengdu, China
 - 2017, Dynamic Earth high-resolution imaging and temporal changes monitoring at a variety of scales, AGU Fall Meeting, New Orleans, USA
 - 2017, Faulting mechanics and earthquake physics, China Geosciences Union Annual Meeting, Beijing, China
 - 2016, A spectrum of fault slip along subduction zones: From megathrust earthquakes to aseismic transient slip, Asia Oceania Geosciences Society Annual Meeting, Beijing, China
 - 2016, 2015, Frontier in Earthquake Physics, China Geosciences Union Annual Meeting, Beijing, China
 - 2015, Slow Earthquakes: Diversity in Fault Motion and Their Implications in Earthquake Dynamics, SSA Annual Meeting, Pasadena, CA, US
 - 2012, Evolution and Mechanics of Continental and Oceanic Lithosphere, Deep Sea and Earth System Science Meeting, Shanghai, China
 - 2012, Subducted Seamount and Earthquakes, SSA Annual Meeting, San Diego, CA, US
 - 2007, High-Resolution Imaging of Active Fault Zone Structures, AGU Fall Meeting, San Francisco, CA, US

University, Department, and Programme services

- University representative of IRIS (Incorporated Research Institute of Seismology)
- Faculty Board member, 2019-2020
- Committee of Exchange Student Program in Faculty of Science, CUHK
- Programme representative of Library Committee
- Seminar coordinator of Earth System Sciences Programme
- Coordinator of academic exchange and collaboration
- Programme representative at New Asia College

Students Supervised

1. Jinping Zi, PhD, 2020.08-
2. Aqeel Abbas, PhD, 2020.08-

3. Bowie, Yuk Po Chan, Mphil, 2020.08-
4. Junhao Song, PhD, 2019.08-
5. Han Chen, PhD, 2018.08-
6. Suli Yao, PhD, 2017.08-
7. Xiang Chen, PhD, 2016.08-2021.09, now Postdoc at GFZ, Potsdam
8. Yi Luan, PhD, 2015.08-
9. Pengcheng Zhou, PhD, 2016.08-2020.12, now RA at South China Sea Inst. Oceanology
10. Gaohua Zhu, PhD, 2016.08-2020.07, now Postdoc at CUHK
11. Martin Bing Hun Lee, MPhil, 2016.08 - 2019.10, now PhD student at CUHK
12. Bing He, MPhil, 2015.08 - 2017.07, now PhD student at University of Rhode Island

Postdocs and Visitors

1. Rumeng Guo, Postdoc fellow, 2020.09-2021.08, now Associate Research Professor at Innovation Academy for Precision Measurement Science and Technology, CAS
2. Chunyu Liu, Postdoc fellow, 2020.07-
3. Gaohua Zhu, Postdoc fellow, 2020.06-
4. Xiaohuan Jiang, Postdoc fellow, 2019.09-2021.10, now Lecturer at Wuhan Polytechnic University
5. Jiangyang Zhang, Postdoc fellow, 2019.05-2021.05, now Associate Research Professor at South China Sea Institute of Oceanology, CAS
6. Yaohui Duan, Postdoc fellow, 2017.11 - 2019.02
7. Fan Zhang, Postdoc fellow, 2016.01 - 2017.06, now Research Professor at South China Sea Institute of Oceanology
8. Huihui Weng, Postdoc fellow, 2015.09 - 2018.04, now postdoc at University of Nice
9. Naidan Yun, visiting undergrad, 2018.06-2018.08, now graduate student at Peking University
10. Laiyin Guo, visiting PhD, 2017.09-2017.12, Tongji University
11. Chuan Yan, Honorary postdoc fellow, 2016.09-2016.11
12. Jiuxun Yin, visiting MPhil, 2015.09-2015.12, now PhD at Harvard University
13. Huihui Weng, visiting PhD, 2015.02-2015.05, now postdoc at University of Nice

Media interview

- Researchers link deadly Sichuan quake to fracking, 10/2020
- 2019: The year fracking earthquakes turned deadly, Inside Science, 12/2019
- Earthquake and tsunami threat of the Makran margin, Xinhua News Agency, 01/2018
- 2017 Sichuan Jiuzhaigou earthquake, Southern China Morning Post, 08/2017
- Ring of Fire, CNN International, 01/2017
- Can animals predict earthquakes, Financial Times, 07/2015
- When God's Wrath Visits: the science of earthquakes, CUHK Newsletter, 05/2015
- 2015 Nepal Earthquake, Wall Street Journal, 04/2015

Field Work and Sea Experience

- R/V Shiyan 3, China-Pakistan Joint Research Expedition, 01/2018
- Seismic experiment of short-period seismometers in Binchuan, Yunnan, China, 01/2018
- Field deployment of short-period seismometers near Xinfengjiang water reservoir, Guangdong, China, 01/2015
- Field deployment of broad-band seismometers in Wabash Valley, Illinois, US, 05/2014
- R/V Wecoma, Broad-band Ocean Bottom Seismograph recovery cruise on Cascadia margin, 06/2011
- Field deployment of Trillium 40 and 120, CMG 3T broad-band seismometers, and Taurus and RefTek 130 data acquisition systems, China, 05/2010